

## **Exhibit 8**

# EXHIBIT 20

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UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
SAN FRANCISCO DIVISION

In re TWITTER INC. SECURITIES  
LITIGATION

Case No. 3:16-CV-05314-JST (SK)  
(Consolidated with 3:16-cv-05439-JST)

This Document Relates To:

CLASS ACTION

ALL ACTIONS

**RESPONSES AND OBJECTIONS TO  
KBC ASSET MANAGEMENT NV'S  
FIFTH SET OF INTERROGATORIES  
TO DEFENDANT TWITTER, INC.**

Pursuant to Rule 33 of the Federal Rules of Civil Procedure, Defendant Twitter, Inc. (“Twitter”), responds as follows to KBC Asset Management NV’s Fifth Set of Interrogatories to Twitter dated April 3, 2019 (the “Interrogatories”; each individual request an “Interrogatory”).

### **RESERVATION OF RIGHTS**

The responses provided herein are set forth without prejudice to Twitter’s right to amend, correct, or supplement these responses (i) as Twitter completes its review and analysis of information and governing law, (ii) as Twitter accesses new or additional information or documents, or (iii) in the event of mistake. Twitter’s investigation is ongoing.

Each of these objections and responses is based on Twitter’s understanding of each individual Interrogatory. To the extent Plaintiffs’ assert an interpretation of any Interrogatory that is inconsistent with Twitter’s understanding, Twitter reserves the right to supplement its responses and objections. By making these responses, Twitter does not concede the information sought is relevant.

By its responses, Twitter does not intend to waive, but, on the contrary, expressly preserve:

1. the right to raise in any subsequent proceeding or in the trial of this or any other action all questions of authenticity, foundation, relevance, materiality, privilege, privacy, and evidentiary admissibility of any information or document identified or produced in response to any interrogatory;
2. the right to object on any ground to the use or introduction into evidence of said information or document in any subsequent proceeding or in the trial of this or any other action on any ground; and
3. the right to object on any ground at any time to other requests for production or other discovery involving said information or documents or the subject matter thereof.

By its responses, Twitter further does not intend to waive, but expressly preserves, all rights and privileges, including but not limited to the attorney-client privilege, work product protection, and constitutional, statutory and/or common law rights to privacy and confidentiality.

If any privileged or otherwise protected information is inadvertently produced, such disclosure is inadvertent and shall not constitute a waiver of Twitter's claims to such privilege or doctrine with respect to that information, and any failure to assert a privilege or doctrine as to one piece of information shall not be deemed to constitute a waiver of the privilege or doctrine as to any other information so protected. Additionally, in the event that any privileged or protected information is disclosed by Twitter, Twitter reserves the right to demand that the recipient return to it any such disclosure and all copies thereof, and to demand that the recipient destroy any materials that contain the privileged or protected information. These requirements supplement, without superseding, any applicable orders regarding confidential information.

### **GENERAL OBJECTIONS**

Twitter incorporates each of the following General Objections into each and every specific response to the Interrogatories below. The assertion of the same, similar, or additional objections in response to specific interrogatories does not waive, limit, or modify any of Twitter's General Objections to the Interrogatories.

1. Twitter reserves all rights to object to the use of any responses herein in any subsequent proceeding, including the trial of this or any action. To the extent Twitter responds to these Interrogatories, Twitter does not concede that the information requested is either relevant to any party's claim or defense or proportional to the needs of the case. Twitter preserves all objections as to competency, relevancy, authenticity, materiality and admissibility. Twitter expressly reserve the right to object to further discovery into the subject matter of any of these Interrogatories.

2. Twitter objects to Plaintiffs' definitions, instructions, and Interrogatories to the extent that they improperly attempt to expand, alter, or modify the scope of permissible discovery under, or impose a duty or obligation that is inconsistent with, in excess of, or not authorized by, the Federal Rules of Civil Procedure ("FRCP"), the Local Rules of the U.S. District Court for the Northern District of California (the "Local Rules"), or any other applicable law (collectively, the "Applicable Law"). In responding to these Interrogatories, Twitter shall follow the FRCP, the

Local Rules, and any orders entered by the Court rather than any of Plaintiffs' instructions and requirements that go beyond or contradict those legal requirements.

3. Twitter objects to the numbering of the Interrogatories. What Plaintiffs previously labeled as "Interrogatory 1" in their First Interrogatory to Defendant Twitter, Inc. on December 22, 2017, actually included six discrete, stand-alone subparts that sought information about distinct subjects. In responding to the various subparts, Defendants count them as six separate interrogatories under Rule 33(a)(1) of the FRCP. Accordingly, the Interrogatory as to which Twitter now respond should be labeled as Interrogatory 15.

4. Twitter objects to each and every Interrogatory to the extent that such Interrogatory asks Twitter to identify or produce documents or communications obtained pursuant to confidentiality obligations; confidential business, financial, or other proprietary information of a third-party; and/or documents protected from disclosure by law, court order, or any agreement with respect to confidentiality or nondisclosure. Twitter further objects to the Interrogatories to the extent that they purport to require disclosure of any information prohibited from disclosure by any laws or regulations of any state, the United States, or any other country.

5. Twitter objects to each and every Interrogatory to the extent that such Interrogatory seeks all documents or communications in response to the Interrogatory on the grounds that such requirements are overbroad and unduly burdensome and impose burdens different from or in addition to those permitted under the Applicable Law.

6. Twitter objects to each and every Interrogatory to the extent that such Interrogatory seeks information that is not relevant to the claims or defenses of any party or are not proportional to the needs of the case, considering the importance of the issues at stake in the action, the amount in controversy, the parties' relative access to relevant information, the parties' resources, the importance of the discovery in resolving the issues, and whether the burden or expense of the proposed discovery outweighs its likely benefit.

7. Twitter objects to each and every Interrogatory to the extent that such Interrogatory is vague, ambiguous, or unintelligible; fails to describe the documents or communications sought with sufficient particularity to allow for a meaningful response; and/or requires Twitter to

speculate as to the nature or scope of the documents or communications sought and/or requires Twitter to speculate as to what information is being requested.

8. Twitter objects to each and every Interrogatory to the extent that such Interrogatory is overbroad, duplicative, oppressive, unduly burdensome, calls for information that is obtainable from some other source that is more convenient, less burdensome, or less expensive, or requests information that is not admissible into evidence.

9. Twitter objects to each and every Interrogatory to the extent that such Interrogatory seeks documents or information already in the possession of Plaintiffs, are equally accessible to Plaintiffs, or that are available to Plaintiffs through public sources or records, on the ground that it subjects Twitter to unreasonable and undue burden and expense.

10. Twitter objects to each and every Interrogatory to the extent that such Interrogatory seeks information protected by the attorney-client privilege, the attorney work-product doctrine, the joint defense or common-interest doctrine, and/or any other constitutional, statutory, regulatory, or common law privilege, doctrine, immunity, rule of confidentiality, or protection from disclosure that may attach to the information requested.

11. Twitter objects to each and every Interrogatory to the extent that such Interrogatory requires the disclosure of information that would violate any constitutional, statutory, regulatory, common law, and/or other judicially recognized privacy interest, protection, or privilege of any current or former employee or representative of Twitter or of any third party.

### **OBJECTIONS TO DEFINITIONS**

1. Twitter objects to the Definitions to the extent that they seek to impose obligations on Twitter different from or greater than those imposed by the Applicable Law.

2. Twitter objects to the definition of “Class Period” as overbroad, unduly burdensome, and beyond the permissible scope of discovery given the nature of the claims against Twitter. Specifically, Twitter objects to the inclusion of “information that relates to” the Class Period as overbroad, unduly burdensome, and unascertainable. Unless otherwise specified, Defendants will provide information responsive to each and every Interrogatory that incorporates the term “Class Period” for the period February 6, 2015, to July 28, 2015, inclusive.

3. Twitter objects to the definition of “DAU” as vague and ambiguous, as it does not actually define that term to refer to DAU “calculated in a manner consistent with [Twitter’s] public statements regarding the DAU metric during the Relevant Period,” without identify all such public statements regarding DAU that Twitter made. Twitter neither defined, nor described any manner in which to calculate “DAU” in its public disclosures during the Relevant Period. Twitter thus objects to this definition to the extent it asks Twitter to provide, or suggests that Twitter had, that there existed, or that Twitter was required to maintain, a single definition of, or manner of calculating, “DAU” during the Relevant Period.

4. Twitter objects to the definition of “Document(s)” to the extent that such definition renders any Interrogatory overly broad and unduly burdensome by requiring (i) restoration of documents or data that are not retained in the ordinary course of business and that reside exclusively on extant backup tapes of electronic media; (ii) recovery of documents or data that have been deleted or are fragmented; or (iii) collection of documents or data that reside exclusively on instant-message, text-message, message-board, and similar systems not maintained, controlled, or sanctioned for use by Twitter.

5. Twitter objects to the definition of “[i]dentify all Documents” as overbroad and unduly burdensome to the extent that the Interrogatories seek information from inaccessible or unknown parties and to the extent that they seek information that is not reasonably known or obtainable by Twitter.

6. Twitter objects to the definition of “MAU” as vague and ambiguous, as KBC does not actually define that term, but refers to MAU “calculated in a manner consistent with [Twitter’s] public statements regarding the MAU metric during the Relevant Period,” without identify all such public statements regarding MAU that Twitter made. Twitter further objects to the definition of MAU to the extent it differs from how Twitter’s 10-Ks define or use these terms. In responding to the Requests, Twitter will interpret “MAU(s)” and “Monthly Active Users” to refer to Twitter users who logged in or were otherwise authenticated and accessed Twitter through its website, mobile website, desktop or mobile applications, SMS or registered third-party



applications or websites in the 30-day period ending on the date of measurement. *See* FY2014 10-K at 45, FY2015 10-K at 43.

7. Twitter objects to the definition of “Relevant Period” as overbroad, unduly burdensome, and beyond the permissible scope of discovery given the nature of the claims against Twitter. Twitter also objects to the definition of “Relevant Period” as unintelligible in that it contradicts paragraph 6 of KBC’s Fifth Set of Interrogatories, which states that information shall be produced from October 1, 2014 to September 30, 2015. Twitter also objects to the inclusion of “documents and information that relate to” the Relevant Period as overbroad, unduly burdensome, and unascertainable. Unless otherwise specified, Twitter will provide information responsive to each and every Interrogatory that incorporates the term “Relevant Period” for the period October 1, 2014 to September 30, 2015, inclusive.

8. Twitter objects to the definition of “Twitter” as overbroad and unduly burdensome to the extent that the Interrogatories seek information from inaccessible or unknown parties and to the extent that they seek information that is not reasonably known or obtainable by Twitter. Twitter further objects to the definition as vague and ambiguous and because it calls for legal conclusions with respect to the terms “predecessors,” “successors,” “divisions,” “subsidiaries,” “agents,” and “anyone acting or purporting to act on its behalf.” Twitter further objects to the definition of “Twitter” to the extent it purports to encompass information that is protected by the attorney-client privilege, the attorney work-product doctrine, and/or any other lawfully recognized privilege, protection, or immunity from disclosure; and/or to the extent that they purport to impose obligations greater than those set forth in the Federal Rules of Civil Procedure. Twitter further objects to the definition to the extent that it calls for the identification of any “officers, directors, employees, agents or anyone acting or purporting to act on its behalf.” Subject to these objections, Twitter will interpret the terms “Twitter” and the “Company” to refer to Twitter, Inc. and any of its employees, officers, or directors acting in their official capacities.

9. Twitter also objects to the definitions of “You” and “Your” to the extent they purport to include the individual Defendants Anthony Noto and Richard Costolo. Plaintiff has

propounded these Interrogatories on Twitter, and has also propounded separate interrogatories on the Individual Defendants. Twitter will not respond on behalf of the Individual Defendants.

10. Twitter objects to the definitions of “and” and “or” as vague and ambiguous to the extent that they attempt to define words beyond their ordinary meaning. Subject to these objections, Twitter will interpret these words in accordance with their ordinary meanings.

### **SPECIFIC OBJECTIONS AND RESPONSES**

Twitter sets forth its specific objections and responses to the individual Interrogatories below. By setting forth such specific objections, Twitter does not in any way limit or restrict the General Objections and Objections to Definitions set forth above.

#### **INTERROGATORY NO. 10:**

**State all facts and Identify all Documents supporting Twitter’s belief or understanding as to the reason(s) for Twitter’s stock price movement on April 28, 2015.**

#### **RESPONSE TO INTERROGATORY NO. 10:**

In addition to the foregoing General Objections and Objections to Definitions, which are incorporated by reference herein, Twitter specifically objects to this Interrogatory as overbroad, unduly burdensome, vague and ambiguous. Specifically, Twitter objects to the phrases “Twitter’s belief or understanding,” and “reason(s) for Twitter’s stock price movement” as vague and ambiguous, as Plaintiffs do not define what those phrases, or any terms within those phrases, mean. Twitter further objects that this Interrogatory seeks information that is not relevant to any party’s claim or defense because it seeks information regarding Twitter’s apparent subjective belief or understanding of Twitter’s stock price movement on April 28, 2015 rather than the actual cause(s) or reason(s) of any movement in Twitter’s stock price on that particular day. Twitter further objects to this Interrogatory to the extent it asks Twitter to provide, or implies that there existed, a single, company-wide understanding or belief as to the reasons of Twitter’s purported stock price movement on any particular day during the Relevant Period. Twitter further objects to this Interrogatory because it seeks “the mental state of a corporate defendant,” which the Court in this action has previously ruled is not a proper topic for examination of Twitter, ECF No. 280 at 2-3, and which is, in any event, not relevant to any claims or defenses in this action. Twitter further

objects to this Interrogatory as the information sought is more appropriately discoverable through depositions of specific individuals as to their beliefs or understandings, as the Court previously recommended, or through expert discovery. ECF No. 280 at 2-3. Twitter further objects to this Interrogatory to the extent that it seeks information protected by the attorney-client privilege, work product doctrine, common interest privilege, and/or any other constitutional, statutory, regulatory, or common law privilege, doctrine, immunity, rule of confidentiality, or protection from disclosure that may attach to the information requested.

Subject to and without waiving these foregoing General and Specific Objections, Twitter responds that it is not aware of a single, contemporaneous, company-wide understanding of Twitter's stock price movement on April 28, 2015. Twitter further responds that this Interrogatory is premature because the information sought is related to expert discovery. Twitter therefore reserves the right to supplement its response to this Interrogatory once expert discovery is complete.

**INTERROGATORY NO. 11:**

**State all facts and Identify all Documents supporting Twitter's belief or understanding as to the reason(s) for Twitter's stock price movement on April 29, 2015.**

**RESPONSE TO INTERROGATORY NO. 11:**

In addition to the foregoing General Objections and Objections to Definitions, which are incorporated by reference herein, Twitter specifically objects to this Interrogatory as overbroad, unduly burdensome, vague and ambiguous. Specifically, Twitter objects to the phrases "Twitter's belief or understanding," and "reason(s) for Twitter's stock price movement" as vague and ambiguous, as Plaintiffs do not define what those phrases, or any terms within those phrases, mean. Twitter further objects that this Interrogatory seeks information that is not relevant to any party's claim or defense because it seeks information regarding Twitter's apparent subjective belief or understanding of Twitter's stock price movement on April 29, 2015 rather than the actual cause(s) or reason(s) of any movement in Twitter's stock price on that particular day. Twitter further objects to this Interrogatory to the extent it asks Twitter to provide, or implies that there existed, a single, company-wide understanding or belief as to the reasons of Twitter's purported

1 stock price movement on any particular day during the Relevant Period. Twitter further objects to  
 2 this Interrogatory because it seeks “the mental state of a corporate defendant,” which the Court in  
 3 this action has previously ruled is not a proper topic for examination of Twitter. ECF No. 280 at  
 4 2-3, and which is, in any event, not relevant to any claims or defenses in this action. Twitter  
 5 further objects to this Interrogatory as the information sought is more appropriately discoverable  
 6 through depositions of specific individuals as to their beliefs or understandings, as the Court  
 7 previously recommended, or through expert discovery. ECF No. 280 at 2-3. Twitter further  
 8 objects to this Interrogatory to the extent that it seeks information protected by the attorney-client  
 9 privilege, work product doctrine, common interest privilege, and/or any other constitutional,  
 10 statutory, regulatory, or common law privilege, doctrine, immunity, rule of confidentiality, or  
 11 protection from disclosure that may attach to the information requested.

12 Subject to and without waiving these foregoing General and Specific Objections, Twitter  
 13 responds that it is not aware of a single, contemporaneous, company-wide understanding of  
 14 Twitter’s stock price movement on April 29, 2015. Twitter further responds that this Interrogatory  
 15 is premature because the information sought is related to expert discovery. Twitter therefore  
 16 reserves the right to supplement its response to this Interrogatory once expert discovery is  
 17 complete.

18  
 19 **INTERROGATORY NO. 12:**

20 **State all facts and Identify all Documents supporting Twitter’s belief or**  
 21 **understanding as to the reason(s) for Twitter’s stock price movement on July 28, 2015.**

22 **RESPONSE TO INTERROGATORY NO. 12:**

23 In addition to the foregoing General Objections and Objections to Definitions, which are  
 24 incorporated by reference herein, Twitter specifically objects to this Interrogatory as overbroad,  
 25 unduly burdensome, vague and ambiguous. Specifically, Twitter objects to the phrases “Twitter’s  
 26 belief or understanding,” and “reason(s) for Twitter’s stock price movement” as vague and  
 27 ambiguous, as Plaintiffs do not define what those phrases, or any terms within those phrases,  
 28 mean. Twitter further objects that this Interrogatory seeks information that is not relevant to any

party's claim or defense because it seeks information regarding Twitter's apparent subjective belief or understanding of Twitter's stock price movement on July 28, 2015 rather than the actual cause(s) or reason(s) of any movement in Twitter's stock price on that particular day. Twitter further objects to this Interrogatory to the extent it asks Twitter to provide, or implies that there existed, a single, company-wide understanding or belief as to the reasons of Twitter's purported stock price movement on any particular day during the Relevant Period. Twitter further objects to this Interrogatory because it seeks "the mental state of a corporate defendant," which the Court in this action has previously ruled is not a proper topic for examination of Twitter. ECF No. 280 at 2-3, and which is, in any event, not relevant to any claims or defenses in this action. Twitter further objects to this Interrogatory as the information sought is more appropriately discoverable through depositions of specific individuals as to their beliefs or understandings, as the Court previously recommended, or through expert discovery. ECF No. 280 at 2-3. Twitter further objects to this Interrogatory to the extent that it seeks information protected by the attorney-client privilege, work product doctrine, common interest privilege, and/or any other constitutional, statutory, regulatory, or common law privilege, doctrine, immunity, rule of confidentiality, or protection from disclosure that may attach to the information requested.

Subject to and without waiving these foregoing General and Specific Objections, Twitter responds that it is not aware of a single, contemporaneous, company-wide understanding of Twitter's stock price movement on July 28, 2015. Twitter further responds that this Interrogatory is premature because the information sought is related to expert discovery. Twitter therefore reserves the right to supplement its response to this Interrogatory once expert discovery is complete.

#### **INTERROGATORY NO. 13:**

**For Twitter's CFO dashboard (*see, e.g., TWTR\_SHEN\_00104601*), identify the following during the Class Period:**

- (a) the person(s) who created the CFO dashboard and the reason it was created;**
- (b) the person(s) who had input into the metrics included in the CFO dashboard;**

- (c) any metric(s) included in the CFO dashboard;
- (d) the person(s) who had access to and/or received the CFO dashboard;
- (e) the manner in which the CFO dashboard was disseminated or accessed and the frequency of any such dissemination; and
- (f) the frequency with which the data on the CFO Dashboard was updated.

**RESPONSE TO INTERROGATORY NO. 13:**

In addition to the foregoing General Objections and Objections to Definitions, which are incorporated by reference herein, Twitter specifically objects to this Interrogatory as overbroad, unduly burdensome, vague, ambiguous, and seeking information not relevant to any party's claim or defense. Twitter further objects to this Interrogatory as it does not define the terms "access," "created" or "input," which are vague and ambiguous, and it does not provide enough information for Twitter to determine what specific information this Interrogatory seeks. Twitter further objects to this Interrogatory as it fails to define the term "CFO Dashboard". Because Plaintiffs have not specifically identified the "CFO Dashboard" that is the subject of this Interrogatory, Twitter is unable to determine whether its response is applicable to any particular document and, accordingly, Twitter reserves the right to contest the application of its response in this Interrogatory to any particular document that Plaintiffs have not identified in this Interrogatory. Twitter also objects to this Interrogatory to the extent that it seeks information protected by the attorney-client privilege, work product doctrine, common interest privilege, and/or any other constitutional, statutory, regulatory, or common law privilege, doctrine, immunity, rule of confidentiality, or protection from disclosure that may attach to the information requested. Twitter further objects to this Interrogatory to the extent that it seeks information that is already in Plaintiffs' possession and/or that is equally accessible to Plaintiffs. Twitter additionally objects to this Interrogatory as improperly compound in that it contains multiple subparts.

Subject to and without waiving these foregoing General and Specific Objections, and based on Twitter's understanding and reasonable interpretation of the Interrogatory, Twitter responds as follows:

(a) Michael McElvaney was involved in the creation of the CFO Dashboard. Twitter is not aware of a single, company-wide understanding of the specific reason(s) why the CFO dashboard was created. However, it is Twitter's general understanding, following a reasonable investigation, that the CFO dashboard was created, at least in part, to put in a single location metrics that particular employees wanted to track to carry out their job responsibilities and/or to potentially help them assess Twitter's strategic goals or potential opportunities. Twitter makes no representation that any particular employee did or did not in fact review any particular metric in the CFO Dashboard during the Relevant Period.

(b) After a reasonable investigation, Twitter identifies the following individual as likely having had input into which metrics were included in the CFO dashboard:

- Anthony Noto
- Kenney Deng
- Celia Poon
- Ethan Yeh
- Jennifer Romanek
- Linus Lee

(c) The CFO Dashboard is a deprecated dashboard, and is no longer readily accessible by Twitter. During the Relevant Period, no contemporaneous record was manually or automatically created or maintained that identifies the metrics included in the CFO Dashboard. However, after a reasonable investigation, it is Twitter's understanding that the metrics contained in the CFO Dashboard are reflected in the body of the Key Metrics Summary emails, which Twitter produced in this litigation, *see, e.g.*, TWTR\_SHEN\_00230857, and the information sought in this particular subpart is therefore equally accessible to Plaintiffs. In responding to this Interrogatory, Twitter therefore directs Plaintiffs to the Key Metrics Summary emails.

(d) The CFO Dashboard is a deprecated dashboard, and is no longer readily accessible by Twitter. No contemporaneous record was manually or automatically created or maintained that identifies the individuals who were granted access to the CFO Dashboard. However, after a

reasonable investigation, Twitter identifies the following individuals who either requested access or were likely given access to the CFO Dashboard at any point during the Relevant Period:

- Brian Deely
- Michael McElvaney
- Jill Silver
- Yvonne Leung
- Iuliana Pascu
- Krista Bessinger
- David Rivinus
- Ethan Yeh
- Anthony Noto
- Richard Costolo
- Kevin Weil
- Amir Movafaghi
- Adam Bain
- Alex Roetter
- Vijaya Gadde
- Adam Messinger
- Gabriel Stricker
- Leslie Carroll
- Skip Schipper
- David Legacki
- Phil Knudston
- Todd Morgenfeld
- Steve McGuinness
- Robert Kaiden
- Jack Dorsey
- Katie Stanton



- Balaji Sankaran
- Ankit Gupta
- Celia Poon
- Austin Johnsen
- Kenny Deng
- Linus Lee
- Nathan Chan
- Charles Gorintin
- Shamit Patel
- Jennifer Romanek

Twitter makes no representation that any identified individual (i) accessed the CFO Dashboard on any given date during the Relevant Period; (ii) had access to the CFO Dashboard for any particular period of time during the Relevant Period; or (iii) reviewed any particular metrics contained in the CFO Dashboard during the Relevant Period. The period during which any particular identified individual had access to the CFO Dashboard may have varied by individual.

(e) Access to the CFO Dashboard was restricted to authorized users only. Once authorized, a user could access the CFO Dashboard via a dedicated link at any time.

(f) The data in the CFO Dashboard was updated typically once a day. However, the data contained in that dashboard was not current as of the day on which the data was refreshed, but typically lagged by at least one day, if not more, depending on the source from which the data was being pulled.

Twitter has identified this information following a reasonable search of available materials. Twitter reserves the right to supplement and/or amend this response should they learn any additional information responsive to Interrogatory 13.

**INTERROGATORY NO. 14:**

**For Twitter's FAA Tableau Dashboard (*see, e.g., TWTR\_SHEN\_00256539*), identify the following during the Class Period:**

- 1 (a) the person(s) who created the FAA Tableau Dashboard;
- 2 (b) the person(s) who had input into the metrics included in the FAA Tableau
- 3 Dashboard;
- 4 (c) any metric(s) included in the FAA Tableau Dashboard;
- 5 (d) the person(s) who had access to and/or received the FAA Tableau Dashboard;
- 6 (e) the manner in which the FAA Tableau Dashboard was disseminated or
- 7 accessed and the frequency of any such dissemination; and
- 8 (f) the frequency with which the data on the FAA Tableau Dashboard was
- 9 updated.

10 **RESPONSE TO INTERROGATORY NO. 14:**

11 In addition to the foregoing General Objections and Objections to Definitions, which are  
 12 incorporated by reference herein, Twitter specifically objects to this Interrogatory as overbroad,  
 13 unduly burdensome, vague, ambiguous, and seeking information not relevant to any party's claim  
 14 or defense. Twitter further objects to this Interrogatory as it does not define the terms "access,"  
 15 "created" or "input," which are vague and ambiguous, and it does not provide enough information  
 16 for Twitter to determine what specific information this Interrogatory seeks. Twitter further objects  
 17 to this Interrogatory as it fails to define the term "FAA Tableau Dashboard." Because Plaintiffs  
 18 have not specifically identified the "FAA Tableau Dashboard" that is the subject of this  
 19 Interrogatory, Twitter is unable to determine whether its response is applicable to any particular  
 20 document and, accordingly, Twitter reserves the right to contest the application of its response in  
 21 this Interrogatory to any particular document that Plaintiffs have not identified in this  
 22 Interrogatory. Twitter also objects to this Interrogatory to the extent that it seeks information  
 23 protected by the attorney-client privilege, work product doctrine, common interest privilege,  
 24 and/or any other constitutional, statutory, regulatory, or common law privilege, doctrine,  
 25 immunity, rule of confidentiality, or protection from disclosure that may attach to the information  
 26 requested. Twitter further objects to this Interrogatory to the extent that it seeks information that  
 27 is already in Plaintiffs' possession and/or that is equally accessible to Plaintiffs. Twitter

1 additionally objects to this Interrogatory as improperly compound in that it contains multiple  
2 subparts.

3 Subject to and without waiving these foregoing General and Specific Objections, and  
4 based on Twitter's understanding and reasonable interpretation of the Interrogatory, Twitter  
5 responds as follows:

6 (a) The FAA Tableau Dashboard is a deprecated dashboard, and is no longer readily  
7 accessible by Twitter. No contemporaneous record was manually or automatically created or  
8 maintained that identifies the individuals involved in the creation of the dashboard. However,  
9 after a reasonable investigation, Twitter identifies Nathan Chan as likely having created the FAA  
10 Tableau Dashboard.

11 (b) The FAA Tableau Dashboard is a deprecated dashboard, and is no longer readily  
12 accessible by Twitter. No contemporaneous record was manually or automatically created or  
13 maintained that identifies the individuals who had input into the metrics included in the FAA  
14 Tableau Dashboard. However, after a reasonable investigation, Twitter identifies Nathan Chan as  
15 one person who likely had input into which metrics to include in the FAA Tableau Dashboard.

16 (c) The FAA Tableau Dashboard is a deprecated dashboard, and is no longer readily  
17 accessible by Twitter. No contemporaneous record was manually or automatically created or  
18 maintained that identifies the metrics included in the FAA Tableau Dashboard. However, after a  
19 reasonable investigation, Twitter identifies the FAA Tableau Dashboard as likely having included  
20 MAU, DAU, DAU/MAU, Daily Signups, Daily Tweets, Daily Tweeters, Daily Tweets/DAU, 28  
21 Day Signups, 28 Day Churn, 28 Day Churn / MAU, Resurrections and Dormants, among other  
22 metrics, some of which could be further analyzed on a country and/or client basis.

23 (d) The FAA Tableau Dashboard is a deprecated dashboard, and is no longer readily  
24 accessible by Twitter. No contemporaneous record was manually or automatically created or  
25 maintained that identifies the individuals who had access to the FAA Tableau Dashboard at any  
26 given time. However, after a reasonable investigation, Twitter identifies the following individuals  
27 who either requested access or were likely given access to the FAA Tableau Dashboard:

- 28 • Ankit Gupta

- 1 • Linus Lee
- 2 • Flavien Bessede
- 3 • Alex Rosner
- 4 • Brian Deely
- 5 • Nathan Chan
- 6 • Jerry Chu
- 7 • Daniel Seisun
- 8 • Jeremy Rishel
- 9 • Shamit Patel
- 10 • Tim Abraham
- 11 • Ethan Yeh
- 12 • Charles Gorintin
- 13 • Guy Hugot-Derville
- 14 • Yi Liu
- 15 • Jay Baxter
- 16 • Jonathan Liu
- 17 • Charles Kwong
- 18 • Anthony Noto
- 19 • Celia Poon
- 20 • Austin Johnsen
- 21 • Srikanth Thiagarajan
- 22 • Kate Taylor
- 23 • Yvonne Leung
- 24 • Sebastien Lefebvre
- 25 • Kenney Deng
- 26 • Prasad Wagle
- 27 • Jennifer Romanek
- 28 • Meredith Finn

- Rita Garg
- Jeff Kan
- Gungor Polatkan
- Jatinder Singh
- Jason Harris
- Mike Nierenberg
- Michael Carney
- Yi Yu
- Phillip Klien
- Todd Jackson
- Sarah Downs
- Linda Jiang
- Diego Santos
- Rachel Bremer
- Ashu Manohar
- Viviane Freitas Sales
- Kevin Weil
- Iuliana Pascu
- Jonathan Gruhl
- Travis Lull
- Berthe Noujaim
- Tom Robertson

Twitter makes no representation that any identified individual (i) accessed the FAA Tableau Dashboard on any given date during the Relevant Period; (ii) had access to the FAA Tableau Dashboard for any particular period of time during the Relevant Period; or (iii) reviewed any particular metrics contained in the FAA Tableau Dashboard during the Relevant Period. The period during which any particular identified individual had access to the FAA Tableau Dashboard may have varied by individual.

(e) The FAA Tableau Dashboard is a deprecated dashboard, and is no longer readily accessible by Twitter. No contemporaneous record was manually or automatically created or maintained that identifies how the dashboard was accessed during the Relevant Period. After a reasonable investigation, it is Twitter's understanding that access to the FAA Tableau Dashboard was restricted to authorized users only. Once authorized, a user could access the FAA Tableau Dashboard via a dedicated link at any time.

(f) The FAA Tableau Dashboard is a deprecated dashboard, and is no longer readily accessible by Twitter. No contemporaneous record was manually or automatically created or maintained that identifies how frequently the data in that dashboard was updated. After a reasonable investigation, Twitter is unable to determine how frequently the data in the FAA Tableau Dashboard was updated.

Twitter has identified this information following a reasonable search of available materials. Twitter reserves the right to supplement and/or amend this response should it learn any additional information responsive to Interrogatory 14.

**INTERROGATORY NO. 15:**

**For Twitter's DAU/MAU Tableau Dashboard (*see, e.g., TWTR\_SHEN\_00256539*), identify the following during the Class Period:**

**(a) the person(s) who created the DAU/MAU Tableau Dashboard;**

**(b) the person(s) who had input into the metrics included in the DAU/MAU Tableau Dashboard;**

**(c) any metric(s) included in the DAU/MAU Tableau Dashboard;**

**(d) the person(s) who had access to and/or received the DAU/MAU Tableau Dashboard;**

**(e) the manner in which the DAU/MAU Tableau Dashboard was disseminated or accessed and the frequency of any such dissemination; and**

**(f) the frequency with which the data on the DAU/MAU Tableau Dashboard was updated.**

**RESPONSE TO INTERROGATORY NO. 15:**

1 In addition to the foregoing General Objections and Objections to Definitions, which are  
 2 incorporated by reference herein, Twitter specifically objects to this Interrogatory as overbroad,  
 3 unduly burdensome, vague, ambiguous, and seeking information not relevant to any party's claim  
 4 or defense. Twitter further objects to this Interrogatory as it does not define the terms "access,"  
 5 "created" or "input," which are vague and ambiguous, and it does not provide enough information  
 6 for Twitter to determine what specific information this Interrogatory seeks. Twitter further objects  
 7 to this Interrogatory as it fails to define the term "DAU/MAU Tableau Dashboard" that does not  
 8 permit Twitter to identify the dashboard as to which this Interrogatory may relate. Because  
 9 Plaintiffs have not specifically identified the "DAU/MAU Tableau Dashboard" that is the subject  
 10 of this Interrogatory, Twitter is unable to determine whether its response is applicable to any  
 11 particular document and, accordingly, Twitter reserves the right to contest the application of its  
 12 response in this Interrogatory to any particular document that Plaintiffs have not identified in this  
 13 Interrogatory. Twitter also objects to this Interrogatory to the extent that it seeks information  
 14 protected by the attorney-client privilege, work product doctrine, common interest privilege,  
 15 and/or any other constitutional, statutory, regulatory, or common law privilege, doctrine,  
 16 immunity, rule of confidentiality, or protection from disclosure that may attach to the information  
 17 requested. Twitter further objects to this Interrogatory to the extent that it seeks information that  
 18 is already in Plaintiffs' possession and/or that is equally accessible to Plaintiffs. Twitter  
 19 additionally objects to this Interrogatory as improperly compound in that it contains multiple  
 20 subparts.

21 Subject to and without waiving these foregoing General and Specific Objections, and  
 22 based on Twitter's understanding and reasonable interpretation of the Interrogatory, Twitter  
 23 responds as follows:

24 (a) The DAU/MAU Tableau Dashboard is a deprecated dashboard, and is no longer  
 25 readily accessible by Twitter. No contemporaneous record was manually or automatically created  
 26 or maintained that identifies the individuals who were involved in the creation of the DAU/MAU  
 27 Tableau Dashboard. However, after a reasonable investigation, Twitter identifies Linus Lee as  
 28 likely having created the DAU/MAU Tableau Dashboard.

(b) The DAU/MAU Tableau Dashboard is a deprecated dashboard, and is no longer readily accessible by Twitter. No contemporaneous record was manually or automatically created or maintained that identifies the individuals who had input into which metrics were included on the DAU/MAU Tableau Dashboard. After a reasonable investigation, Twitter identifies Linus Lee as one person who likely had input into which metrics to include in the DAU/MAU Tableau Dashboard.

(c) The DAU/MAU Tableau Dashboard is a deprecated dashboard, and is no longer readily accessible by Twitter. No contemporaneous record was manually or automatically created or maintained during the Relevant Period that identifies the metrics included in the DAU/MAU Tableau Dashboard. However, after a reasonable investigation, Twitter identifies the DAU/MAU Tableau Dashboard as including MAU and DAU metrics.

(d) The DAU/MAU Tableau Dashboard is a deprecated dashboard, and is no longer readily accessible by Twitter. No contemporaneous record was manually or automatically created or maintained during the Relevant Period listing who had access to the DAU/MAU Tableau Dashboard at any given time. However, after a reasonable investigation, Twitter identifies the following individuals who either requested access or were likely given access to the DAU/MAU Tableau Dashboard during the Relevant Period:

- Linus Lee
- Adam Kinney
- Amir Movafaghi
- Anthony Noto
- Kenney Deng
- Austin Johnsen
- Celia Poon
- Daniel Seisun
- Brian Deely

Twitter makes no representation that any identified individual (i) accessed the DAU/MAU Tableau Dashboard on any given date during the Relevant Period; (ii) had access to the



DAU/MAU Tableau Dashboard for any particular period of time during the Relevant Period; or (iii) reviewed any particular metrics contained in the DAU/MAU Tableau Dashboard during the Relevant Period. The period during which any particular identified individual had access to the DAU/MAU Tableau Dashboard may have varied by individual.

(e) Access to the DAU/MAU Tableau Dashboard was restricted to authorized users only. Once authorized, a user could access the DAU/MAU Tableau Dashboard via a dedicated link at any time.

(f) The DAU/MAU Tableau Dashboard is a deprecated dashboard, and is no longer readily accessible by Twitter. No contemporaneous record was manually or automatically created or maintained during the Relevant Period identifying how frequently the data in that dashboard was updated. After a reasonable investigation, Twitter is unable to determine how frequently the data in the DAU/MAU Tableau Dashboard was updated.

Twitter has identified this information following a reasonable search of available materials. Twitter reserves the right to supplement and/or amend this response should it learn any additional information responsive to Interrogatory 15.

**INTERROGATORY NO. 16:**

**For Twitter's Global Growth Metrics email (see, e.g., TWTR\_SHEN\_00004528), identify the following for the Class Period:**

**(a) the person(s) who created the Global Growth Metrics email;**

**(b) the person(s) who had input into the metrics included in the Global Growth Metrics email;**

**(c) any metric(s) included in the Global Growth Metrics email;**

**(d) the person(s) who had access to and/or received the Global Growth Metrics email;**

**(e) the manner in which the Global Growth Metrics email was disseminated or accessed and the frequency of any such dissemination; and**

**(f) the frequency with which the data on the Global Growth Metrics email was updated.**

**RESPONSE TO INTERROGATORY NO. 16:**

In addition to the foregoing General Objections and Objections to Definitions, which are incorporated by reference herein, Twitter specifically objects to this Interrogatory as overbroad, unduly burdensome, vague, ambiguous, and seeking information not relevant to any party's claim or defense. Twitter further objects to this Interrogatory as it does not define the terms "access," "created" or "input," which are vague and ambiguous, and it does not provide enough information for Twitter to determine what specific information this Interrogatory seeks. Twitter further objects to this Interrogatory as it fails to define the term "Global Growth Metrics email" and provides only a single example of that document that does not permit Twitter to identify all such emails as to which this Interrogatory may relate. Because Plaintiffs have not identified all instances of the "Global Growth Metrics email" that is the subject of this Interrogatory, Twitter is unable to determine whether its response below is applicable to any particular document and, accordingly, Twitter reserves the right to contest the application of its response to this Interrogatory to any particular document that Plaintiffs have not identified in this Interrogatory. Twitter also objects to this Interrogatory to the extent that it seeks information protected by the attorney-client privilege, work product doctrine, common interest privilege, and/or any other constitutional, statutory, regulatory, or common law privilege, doctrine, immunity, rule of confidentiality, or protection from disclosure that may attach to the information requested. Twitter further objects to this Interrogatory to the extent that it seeks information that is already in Plaintiffs' possession and/or that is equally accessible to Plaintiffs. Twitter additionally objects to this Interrogatory as improperly compound in that it contains multiple subparts.

Subject to and without waiving these foregoing General and Specific Objections, and based on Twitter's understanding and reasonable interpretation of the Interrogatory, Twitter responds as follows:

(a) Charles Gorintin and Akash Garg were involved in the creation of the Global Growth Metrics email.

(b) After a reasonable investigation, Twitter identifies Charles Gorintin, Akash Garg, Shamit Patel, and Christian Oestlien as likely having had input into which metrics were included on the Global Growth Metrics emails.

(c) The metrics contained in the Global Growth Metrics emails disseminated during the Relevant Period are readily identifiable in the body of the emails themselves, which Twitter produced in this litigation, *see, e.g.*, TWTR\_SHEN\_00004528, and the information sought in this particular subpart is therefore equally accessible to Plaintiffs. In responding to this Interrogatory, Twitter therefore directs Plaintiffs to the Global Growth Metrics emails.

(d) Charles Gorintin (or someone at his direction) emailed the “Global Growth Metrics email” to the listserv [daily-mau@twitter.com](mailto:daily-mau@twitter.com) at least once each day during the Relevant Period (with limited exception on particular days such email was not sent). After a reasonable search of readily available information, Twitter identifies the following individuals who were likely subscribers of the [daily-mau@twitter.com](mailto:daily-mau@twitter.com) listserv during at least a portion of the Relevant Period and whose email addresses received the “Global Growth Metrics email” at least once during the Relevant Period:

- Max Michaels
- Isabela Baqueros
- Matthew Bilotti
- Jeff Magee
- Bryan Haggerty
- Prasad Wagle
- Sam Traynor
- Thanh Tran
- Joe Xavier
- Abheek Gupta
- Mike Lin
- Timothy Hsu
- Mike Kruzeniski

- Roger Chen
- Aaron Hoffmeyer
- Brian Deely
- Gabriela Pena
- Donald Hamblock
- Yue Zhou
- Shamit Patel
- Murat Soyupak
- Rishikesh Tembe
- Sebastien Lefebvre
- Zhijun Yin
- Ravi Thangavel
- Matt Miller
- Jill Silver
- Shreyas Doshi
- Deb Roy
- Dmitriy Ryaboy
- Dino Fekaris
- Mick Canning
- Adam Whinston
- Nimalan Mahendran
- Matt Harris
- Alex Smolen
- Josh Yang
- Anthony Noto
- Nathan Chan
- Vinay Mahagaokar
- Swapnil Jain

- 1 • Marcus Hanson
- 2 • Tim Abraham
- 3 • Sharon Pithawalla
- 4 • David Gasca
- 5 • Tomoe Makino
- 6 • Tony Huang
- 7 • Rita Garg
- 8 • Kosuke Suzuki
- 9 • Don Hoffman
- 10 • Charles Gorintin
- 11 • Gabriel Stricker
- 12 • Austin Johnsen
- 13 • Amir Movafaghi
- 14 • James Kondo
- 15 • Sam King
- 16 • Gabor Cselle
- 17 • Kenney Deng
- 18 • Leah Dorner
- 19 • Guy Hugot-Derville
- 20 • Ethan Yeh
- 21 • Beatrix Flamenco
- 22 • Amin Heydari
- 23 • Kim Norlen
- 24 • Wendy Riggs
- 25 • Heerad Farkhoor
- 26 • Jim O'Leary
- 27 • David Lam
- 28 • Saurabh Verma

- 1 • Tina Bhatnagar
- 2 • Todd Morgenfeld
- 3 • Abdullah Al Mahmud
- 4 • David Rivinus
- 5 • Leslie Miley
- 6 • Ryan Choi
- 7 • Phillip Klien
- 8 • Kevin Weil
- 9 • Thiaga Rajan
- 10 • Yuichiro Konishi
- 11 • Ranjeet Singh
- 12 • Tony Stilling
- 13 • Emil Leong
- 14 • Prabhavathi Matta
- 15 • Rahul Ganjoo
- 16 • Arjun Maheswaran
- 17 • Adam Bain
- 18 • Brandon Roy
- 19 • Christian Oestlien
- 20 • Sky Frostenson
- 21 • Michael Lin
- 22 • Alex Wu
- 23 • Murphy Finnicum
- 24 • Andres Moreno
- 25 • Alexandru Ghise
- 26 • Leslie Carroll
- 27 • Serdar Domurcuk
- 28 • Shailesh Saini

- 1 • Yvonne Leung
- 2 • Agrawal Gaurav
- 3 • Ankit Gupta
- 4 • Robert Chang
- 5 • Brian Lehman
- 6 • Laurie Hanover
- 7 • Quannan Li
- 8 • Kenneth Kufluk
- 9 • Kate Taylor
- 10 • Rei Okamoto
- 11 • Skip Schipper
- 12 • Francie Strong
- 13 • Sean Edgett
- 14 • Paul Lambert
- 15 • Christine Templin
- 16 • Amy Keating
- 17 • Alex Roetter
- 18 • Davin Bogan
- 19 • Tom Robertson
- 20 • Manu Kumar
- 21 • Adam Messinger
- 22 • Richard Costolo
- 23 • Michele Wiecha
- 24 • Valerie Wagoner
- 25 • Michael Fleischman
- 26 • Xiao Zhang
- 27 • Ashu Manohar
- 28 • Celia Poon

- 1 • Robert Sayre
- 2 • Will Zhou
- 3 • Raghav Jeyaraman
- 4 • Rose Nieh
- 5 • Nicholas Green
- 6 • Ryan Perry
- 7 • Daniel Graf
- 8 • Fei Nan
- 9 • Yassine Hinnach
- 10 • Philip Knudtson
- 11 • Edward Ho
- 12 • Siwei Shen
- 13 • Srikanth Thiagarajan
- 14 • Renee Chorney
- 15 • Aaron Goldsmid
- 16 • Arturo Angulo
- 17 • Jerry Chu
- 18 • Chris Said
- 19 • Kurt Smith
- 20 • Keith Reid
- 21 • Daniel Seisun
- 22 • Vijaya Gadde
- 23 • Rachel Gauthier
- 24 • Jack Dorsey
- 25 • Joshua Liebowitz
- 26 • Alex Rosner
- 27 • Yang Tan
- 28 • Jason McDonnell



- 1 • Flavien Bessede
- 2 • Jeremy Rishel
- 3 • Erika Chin
- 4 • Jeremy Forrester
- 5 • Trisha Quan
- 6 • Raghav Ramesh
- 7 • Michelle Dy
- 8 • Ankur Dahiya
- 9 • Logan Eldridge
- 10 • Sunil Mirpuri
- 11 • Katie Stanton
- 12 • Yi Liu
- 13 • Mollie Vandor
- 14 • Jennifer Fierravanti
- 15 • Kumi Walker
- 16 • Ibrahim Okuyucu
- 17 • Lizan Zhou
- 18 • Krista Bessinger
- 19 • Jenny Hylbert
- 20 • Khan Manzururk
- 21 • Blaire Brown
- 22 • Akash Garg
- 23 • Ratheesh Vijayan
- 24 • Ethan Avey
- 25 • David Bellona
- 26 • Linus Lee
- 27 • Jeff Ma
- 28 • Andrew Lunny

- Oksana Kohutyuk
- Lamar Hogan
- James Tsiamis
- Ying Dong

Twitter makes no representation that (i) any identified individual received any particular Global Growth Metrics email during the Relevant Period; (ii) any identified individual actually subscribed to the daily-mau@twitter.com listserv for any particular period of time during the Relevant Period; or (iii) any of the identified individuals reviewed any particular Global Growth Metrics email during the Relevant Period. The period during which any particular identified individual subscribed to the daily-mau@twitter.com listserv, and the number of Global Growth Metrics emails each identified individual received, varied by individual.

(e) Charles Gorintin (or someone at his direction) emailed the Global Growth Metrics email to the listserv daily-mau@twitter.com at least once daily. Emails sent to that listserv were automatically and instantaneously then emailed to the subscribers of the listserv at that time.

(f) The data in the Global Growth Metrics email were updated once a day typically. However, the data contained in that email were not current as of the day on which the email containing that data were sent, but typically lagged by at least one day, if not more, depending on the source from which the data were being pulled, as the context of each of those emails and surrounding circumstances provides.

Twitter has identified this information following a reasonable search of available materials. Twitter reserves the right to supplement and/or amend this response should it learn of any additional information responsive to Interrogatory 16.

#### **INTERROGATORY NO. 17:**

**For Twitter's Key Metrics Summary email (see, e.g., TWTR\_SHEN\_00230857), identify the following during the Class Period:**

- (a) the person(s) who created the Key Metrics Summary email;**
- (b) the person(s) who had input into the metrics included in the Key Metrics**

**Summary email;**

**(c) any metric(s) included in the Key Metrics Summary email;**

**(d) the person(s) who had access to and/or received the Key Metrics Summary email;**

**(e) the manner in which the Key Metrics Summary email was disseminated or accessed and the frequency of any such dissemination; and**

**(f) the frequency with which the data on the Key Metrics Summary email was updated.**

**RESPONSE TO INTERROGATORY NO. 17:**

In addition to the foregoing General Objections and Objections to Definitions, which are incorporated by reference herein, Twitter specifically objects to this Interrogatory as overbroad, unduly burdensome, vague, ambiguous, and seeking information not relevant to any party's claim or defense. Twitter further objects to this Interrogatory as it does not define the terms "access," "created" or "input," which are vague and ambiguous, and it does not provide enough information for Twitter to determine what specific information this Interrogatory seeks. Twitter further objects to this Interrogatory as it fails to define the term "Key Metrics Summary email" and provides only a single example of that document that does not permit Twitter to identify all such emails as to which this Interrogatory may relate. Because Plaintiffs have not identified all instances of the "Key Metrics Summary email" that is the subject of this Interrogatory, Twitter is unable to determine whether its response is applicable to any particular document and, accordingly, Twitter reserves the right to contest the application of its response to this Interrogatory to any particular document that Plaintiffs have not identified in this Interrogatory. Twitter also objects to this Interrogatory to the extent that it seeks information protected by the attorney-client privilege, work product doctrine, common interest privilege, and/or any other constitutional, statutory, regulatory, or common law privilege, doctrine, immunity, rule of confidentiality, or protection from disclosure that may attach to the information requested. Twitter further objects to this Interrogatory to the extent that it seeks information that is already in Plaintiffs' possession and/or

that is equally accessible to Plaintiffs. Twitter additionally objects to this Interrogatory as improperly compound in that it contains multiple subparts.

Subject to and without waiving these foregoing General and Specific Objections, and based on Twitter's understanding and reasonable interpretation of the Interrogatory, Twitter responds as follows:

(a) Michael McElvaney and Kenney Deng were involved in the creation of the Key Metrics Summary email.

(b) After a reasonable investigation, Twitter identifies the following individual as likely having had input into which metrics were included on the Key Metrics Summary:

- Anthony Noto
- Kenney Deng
- Celia Poon

(c) The metrics contained in the Key Metrics Summary emails disseminated during the Relevant Period are readily identifiable in the body of the emails themselves, which Twitter produced in this litigation, *see, e.g.*, TWTR\_SHEN\_00230857, and the information sought in this particular subpart is therefore equally accessible to Plaintiffs. In responding to this Interrogatory, Twitter therefore directs Plaintiffs to the Key Metrics Summary emails.

(d) After a reasonable investigation, it is Twitter's understanding that the "Key Metrics Summary email" was automatically generated by Tableau and populated with data from the CFO dashboard, and emailed to subscribers of the listserv [tableau-subscriptions@twitter.com](mailto:tableau-subscriptions@twitter.com) at least once each day, from early March 2015 through the end of the Relevant Period. Based on a reasonable search of readily available information, Twitter identifies the following individuals who were likely subscribers of the [tableau-subscriptions@twitter.com](mailto:tableau-subscriptions@twitter.com) listserv during at least a portion of the Relevant Period and whose email addresses received the "Key Metrics Summary email" at least once during the Relevant Period:

- Steve Mcguinness
- Daniel Seisun
- Stephen McIntyre

- 1 • Vijaya Gadde
- 2 • Gabriel Stricker
- 3 • Jack Dorsey
- 4 • Amir Movafaghi
- 5 • Tom Fox
- 6 • Kenney Deng
- 7 • Scott Thwaites
- 8 • Robert Kaiden
- 9 • David Legacki
- 10 • Ethan Yeh
- 11 • Skip Schipper
- 12 • Brian Deely
- 13 • Todd Morgenfeld
- 14 • Niall Horgan
- 15 • Alex Roetter
- 16 • Kevin Weil
- 17 • Adam Messinger
- 18 • Richard Costolo
- 19 • Willem Vanderveen
- 20 • Katie Stanton
- 21 • Facundo Lavino
- 22 • Sharon Chungh
- 23 • Michael Mcelvaney
- 24 • Balaji Sankaran
- 25 • Anthony Noto
- 26 • Adam Bain
- 27 • Omer Keser
- 28 • Katie Lampe

- Jeff Ma
- Jeff DeJelo
- Leslie Carroll

Twitter makes no representation that (i) the email address of any identified individual received any particular Key Metrics Summary email during the Relevant Period; (ii) any identified individual subscribed to the [tableau-subscriptions@twitter.com](mailto:tableau-subscriptions@twitter.com) listserv for any particular period of time during the Relevant Period; or (iii) any of the identified individuals reviewed any particular Key Metrics Summary email during the Relevant Period. The period during which any particular identified individual subscribed to the [tableau-subscriptions@twitter.com](mailto:tableau-subscriptions@twitter.com) listserv, and the number of Key Metrics Summary emails each identified individual received, varied by individual.

(e) The Key Metrics Summary email was emailed to the subscribers of the listserv [tableau-subscriptions@twitter.com](mailto:tableau-subscriptions@twitter.com) at least once daily beginning in early March 2015, and continuing through the end of the Relevant Period.

(f) The data in the Key Metrics Summary was taken directly from data in the CFO dashboard, which was updated in Tableau typically once daily. However, the data contained in that email was not current as of the day on which the email containing that data was sent, but typically lagged by at least one day, if not more, depending on the source from which the data was being pulled, as the context of each of those emails and surrounding circumstances provides.

Twitter has identified this information following a reasonable search of available materials. Twitter reserves the right to supplement and/or amend this response should it learn of any additional information responsive to Interrogatory 17.

#### **INTERROGATORY NO. 18:**

**For each day of the Relevant Period, identify Your total DAU.**

#### **RESPONSE TO INTERROGATORY NO. 18:**

In addition to the foregoing General Objections and Objections to Definitions, which are incorporated by reference herein, Twitter specifically objects to this Interrogatory as overbroad, unduly burdensome, vague, ambiguous and duplicative of information already in Plaintiffs' possession. Twitter further objects to this Interrogatory to the extent that it seeks information

protected by the attorney-client privilege, work product doctrine, common interest privilege, and/or any other constitutional, statutory, regulatory, or common law privilege, doctrine, immunity, rule of confidentiality, or protection from disclosure that may attach to the information requested.

Twitter further objects to the phrase “total DAU” as vague and ambiguous, as the Interrogatory does not define what “total DAU” means. Twitter further objects to this Interrogatory because it: (i) suggests that Twitter had a single, company-wide definition of the term “total DAU” during the Relevant Period; and (ii) purports to require Twitter to create and provide such a definition for purposes of responding to this Interrogatory.

Twitter also objects that Interrogatory is vague, ambiguous, and unintelligible because it is unclear whether this Interrogatory seeks a contemporaneous measurement of “total DAU”, or a post hoc calculation of “total DAU” for each day during the Relevant Period. To the extent this Interrogatory requests that Twitter conduct a post-hoc calculation of “total DAU” for each day during the Relevant Period for purposes of responding to this Interrogatory, Twitter objects to this Interrogatory as vague, unduly burdensome, and exceeding the requirements of Applicable Law. To the extent this Interrogatory requests that Twitter identify any contemporaneous measurement of “total DAU” on any particular day during the Relevant Period, Twitter objects to this Interrogatory for the following reasons:

Twitter did not have, and was not required to have, a single definition of that term or single method of calculating DAU during the Relevant Period. Rather, different groups and individuals at Twitter calculated DAU for various purposes and by applying different methodologies over the Relevant Period. Moreover, the processes by which those groups and individuals calculated DAU evolved over time, in part because of changes (i) regarding the manner and ways in which Twitter users could log in to or access the platform, including, but not limited to, users being able to log in to Twitter through new, non-Twitter owned and operated platforms and applications and Twitter adjusting the ways in which it authenticated its users (*see, e.g.*, Twitter, Inc. Form 10-Q at 4 (filed May 11, 2015)); and (b) to Twitter’s subjective processes for identifying fake, spam, or robot accounts, or users who had violated Twitter’s terms of service; among other reasons. Further,

Twitter periodically reassessed and revised DAU figures as part of its normal processes for identifying and eliminating fake, spam, and robot accounts, including for, but not limited to, external reporting purposes. For all of these reasons, Twitter is not aware of a single, company-wide or “official” daily figure for “total DAU”.

Subject to and without waiving these foregoing General and Specific Objections, and based on Twitter’s understanding and reasonable interpretation of the Interrogatory, Twitter responds that on nearly every day during the Relevant Period, a daily “Global Growth” metrics email was distributed to certain Twitter employees that purported to contain a daily “Overall” DAU figure, representing DAU for all of Twitter’s markets as of the prior day unless otherwise specified, as the context of those emails provide. *See, e.g.*, TWTR\_SHEN\_00004517; TWTR\_SHEN\_00006277. Twitter refers Plaintiffs to these daily emails for a rough approximation of the total DAU for any particular day during the Relevant Period. However, those figures do not necessarily reflect all the ways that Twitter and its employees calculated DAU. Further, those figures do not necessarily reflect the actual “total DAU” for any particular day during the Relevant Period because those figures could be, and generally were, subject to subsequent revision. These revisions were performed as Twitter (i) conducted its normal and ongoing processes for identifying and eliminating fake, spam, and robot accounts, to ensure the accuracy of the data for external reporting purposes, (ii) continued to refine the ways in which identified and counted users on Twitter’s platform for DAU purposes; and (iii) addressed and fixed technical bugs and issues with its systems that tracked and calculated DAU. *See, e.g.*, TWTR\_SHEN\_00126973; TWTR\_SHEN\_00127040; TWTR\_SHEN\_00127239; TWTR\_SHEN\_00127394; TWTR\_SHEN\_00227673.<sup>1</sup>

**INTERROGATORY NO. 19:**

<sup>1</sup> Twitter also notes that from early March 2015 through the end of the Relevant Period, a daily “Key Metrics Summary” email was distributed to certain Twitter employees that purported to contain a daily DAU figure. Twitter also refers Plaintiffs to those emails for a rough approximation of Twitter’s daily DAU figures, subject to the same limitations and conditions set forth above with regard to the daily Global Growth Metrics emails.



1           **For each day of the Relevant Period, identify Your DAU for the Top 20 Markets (as**  
 2 **defined by Your answer to National Elevator Industry Pension Fund’s Fifth Set of**  
 3 **Interrogatories to Defendant Twitter, Inc., Interrogatory No. 13).**

4           **RESPONSE TO INTERROGATORY NO. 19:**

5           In addition to the foregoing General Objections and Objections to Definitions, which are  
 6 incorporated by reference herein, Twitter specifically objects to this Interrogatory as overbroad,  
 7 unduly burdensome, vague, ambiguous and duplicative of information already in Plaintiffs’  
 8 possession. Twitter further objects to this Interrogatory to the extent that it seeks information  
 9 protected by the attorney-client privilege, work product doctrine, common interest privilege,  
 10 and/or any other constitutional, statutory, regulatory, or common law privilege, doctrine,  
 11 immunity, rule of confidentiality, or protection from disclosure that may attach to the information  
 12 requested.

13           Twitter further objects to the term “Top 20 Markets” as vague and ambiguous, as the  
 14 Interrogatory does not define what “Top 20 Markets” means, but rather purports to incorporate by  
 15 reference Twitter’s response to NEI Interrogatory No. 13 asking Twitter to identify its Top 20  
 16 Markets for each quarter during the Relevant Period. For the same reasons that NEI Interrogatory  
 17 No. 13 is objectionable, so too is this Interrogatory objectionable, and Twitter incorporates its  
 18 specific objections to NEI Interrogatory No. 13 to this Interrogatory as if stated herein.

19           Twitter further objects to the term “DAU” as vague and ambiguous, for the same reasons  
 20 set forth above in Twitter’s definitional objections to that term. Twitter further objects to this  
 21 Interrogatory because it: (i) suggests that Twitter had a single, company-wide definition of the  
 22 term “DAU” during the Relevant Period; and (ii) purports to require Twitter to create and provide  
 23 such a definition for purposes of responding to this Interrogatory.

24           Twitter also objects that Interrogatory is vague, ambiguous, and unintelligible because it is  
 25 unclear whether this Interrogatory seeks a contemporaneous measurement of DAU, or a post hoc  
 26 calculation of DAU for Twitter’s top 20 markets for each day during the Relevant Period. To the  
 27 extent this Interrogatory requests that Twitter conduct a post-hoc calculation of DAU for each of  
 28 its top 20 markets for each day during the Relevant Period for purposes of responding to this

Interrogatory, Twitter objects to this Interrogatory as vague, unduly burdensome, and exceeding the requirements of Applicable Law. To the extent this Interrogatory requests that Twitter identify any contemporaneous measurement of “DAU for each of Twitter’s top 20 markets on any particular day during the Relevant Period, Twitter objects to this Interrogatory for the following reasons:

Twitter did not have, and was not required to have, a single definition of, method of calculating DAU during the Relevant Period. Rather different groups and individuals at Twitter calculated DAU for various purposes and by applying different methodologies over the Relevant Period. Moreover, the processes by which those groups and individuals calculated DAU evolved over time, in part because of changes (i) regarding the manner and ways in which Twitter users could log in to or access the platform, including, but not limited to, users being able to log in to Twitter through new, non-Twitter owned and operated platforms and applications and Twitter adjusting the ways in which it authenticated its users (*see, e.g.*, Twitter, Inc. Form 10-Q at 4 (filed May 11, 2015)); and (b) to Twitter’s subjective processes for identifying fake, spam, or robot accounts, or users who had violated Twitter’s terms of service; among other reasons. Further, Twitter periodically reassessed and revised DAU figures as part of its normal processes for identifying and eliminating fake, spam, and robot accounts, including for, but not limited to, external reporting purposes. For all of these reasons, Twitter is not aware of a single, company-wide or “official” daily figure for “DAU”.

Subject to and without waiving the foregoing General and Specific Objections, and based on Twitter’s understanding and reasonable interpretation of the Interrogatory, Twitter responds it conducted a reasonable investigation and has not identified any document or record reflecting Twitter’s Top 20 Markets (as Twitter defines those markets in its response to NEI Interrogatory No. 13) on each day during the Relevant Period, regardless of criteria or definition used to determine the Top 20 Markets (*e.g.*, MAU, DAU, revenue, etc.); nor has it identified any document or record reflecting DAU, however defined or calculated, on a daily basis for each of Twitter’s markets during the Relevant Period. Twitter further responds that it produced in this litigation documents containing Twitter’s daily DAU averaged over each month and quarter (as

the context provides) for Twitter’s Top 20 markets (ranked by overall MAU) during the Relevant Period, including certain “User & Monetization Metrics” presentations (*see, e.g.* TWTR\_SHEN\_00227509; TWTR\_SHEN\_00037364) and documents contained in earnings binder prepared for certain earnings calls (*see, e.g.*, TWTR\_SHEN\_00274808). Twitter refers Plaintiffs to these documents for an approximation of the monthly and quarterly average DAU for Twitter’s top 20 markets (ranked by overall MAU) during the Relevant Period. However, those figures do not necessarily reflect all the ways that Twitter and its employees calculated DAU or determined Twitter’s top 20 markets. Further, those figures could be, and sometimes were subject to subsequent revision as Twitter (i) conducted its normal and ongoing processes for identifying and eliminating fake, spam, and robot accounts, to ensure the accuracy of the data for external reporting purposes, (ii) continued to refine the ways in which identified and counted users on Twitter’s platform for DAU purposes; and (iii) addressed and fixed technical bugs and issues with its systems that tracked and calculated DAU. *See, e.g.*, TWTR\_SHEN\_00126973; TWTR\_SHEN\_00127040; TWTR\_SHEN\_00127239; TWTR\_SHEN\_00127394; TWTR\_SHEN\_00227673.

**INTERROGATORY NO. 20:**

**For each day of the Relevant Period, identify Your total MAU.**

**RESPONSE TO INTERROGATORY NO. 20:**

In addition to the foregoing General Objections and Objections to Definitions, which are incorporated by reference herein, Twitter specifically objects to this Interrogatory as overbroad, unduly burdensome, vague, ambiguous and duplicative of information already in Plaintiffs’ possession. Twitter further objects to this Interrogatory to the extent that it seeks information protected by the attorney-client privilege, work product doctrine, common interest privilege, and/or any other constitutional, statutory, regulatory, or common law privilege, doctrine, immunity, rule of confidentiality, or protection from disclosure that may attach to the information requested.

1 Twitter further objects to the phrase “total MAU” as vague and ambiguous, as the  
 2 Interrogatory does not define what “total MAU” means. Twitter further objects to this  
 3 Interrogatory because it: (i) suggests that Twitter had a single, company-wide definition of the  
 4 term “total MAU” during the Relevant Period; and (ii) purports to require Twitter to create and  
 5 provide such a definition for purposes of responding to this Interrogatory.

6 Twitter also objects that Interrogatory is vague, ambiguous, and unintelligible because it is  
 7 unclear whether this Interrogatory seeks a contemporaneous measurement of “total MAU”, or a  
 8 post hoc calculation of “total MAU” for each day during the Relevant Period. To the extent this  
 9 Interrogatory requests that Twitter conduct a post-hoc calculation of “total MAU” for each day  
 10 during the Relevant Period for purposes of responding to this Interrogatory, Twitter objects to this  
 11 Interrogatory as vague, unduly burdensome, and exceeding the requirements of Applicable Law.  
 12 To the extent this Interrogatory requests that Twitter identify any contemporaneous measurement  
 13 of “total MAU” on any particular day during the Relevant Period, Twitter objects to this  
 14 Interrogatory for the following reasons:

15 Twitter provided the definition it used for its publicly disclosed MAU in its SEC filings  
 16 during the Class Period. *See, e.g.*, Twitter, Inc. 2014 Form 10-K at 45 (“We define MAUs as  
 17 Twitter users who logged in or were otherwise authenticated and accessed Twitter through our  
 18 website, mobile website, desktop or mobile applications, SMS or registered third-party  
 19 applications or websites in the 30-day period ending on the date of the measurement.”). That  
 20 definition changed over time for reasons stated in those filings, including because of, for example,  
 21 changes (i) regarding the manner and ways in which Twitter users could log in to or access the  
 22 platform, including, but not limited to, users being able to log in to Twitter through new, non-  
 23 Twitter owned and operated platforms and applications and Twitter adjusting the ways in which it  
 24 authenticated its users (*see, e.g.*, Twitter, Inc. Form 10-Q at 4 (filed May 11, 2015)); and (b) to  
 25 Twitter’s subjective processes for identifying fake, spam, or robot accounts, or users who had  
 26 violated Twitter’s terms of service; among other reasons. The same definitions did not  
 27 necessarily apply to all instances in which MAU was calculated internally. Further, Twitter  
 28 periodically reassessed and revised MAU figures as part of its normal processes for identifying

1 and eliminating fake, spam, and robot accounts, including for, but not limited to, external  
 2 reporting purposes. For all of these reasons, Twitter is not aware of a single, company-wide or  
 3 “official” daily figure for “total MAU”.

4 Subject to and without waiving these foregoing General and Specific Objections, and  
 5 based on Twitter’s understanding and reasonable interpretation of the Interrogatory, Twitter  
 6 responds that on nearly every day during the Relevant Period, a daily “Global Growth” metrics  
 7 email was distributed to certain Twitter employees that purported to contain a daily “Overall”  
 8 MAU figure, representing MAU for all of Twitter’s markets as of the prior day unless otherwise  
 9 specified, as the context of those emails provide. *See, e.g.*, TWTR\_SHEN\_00004517;  
 10 TWTR\_SHEN\_00006277. Twitter refers Plaintiffs to these daily emails for a rough  
 11 approximation of the total MAU for any particular day during the Relevant Period. However,  
 12 those figures do not necessarily reflect all the ways that Twitter and its employees calculated  
 13 MAU. Further, those figures do not necessarily reflect the actual “total MAU” for any particular  
 14 day during the Relevant Period because those figures could be, and generally were, subject to  
 15 subsequent revision. These revisions were performed as Twitter (i) conducted its normal and  
 16 ongoing processes for identifying and eliminating fake, spam, and robot accounts, to ensure the  
 17 accuracy of the data for external reporting purposes, (ii) continued to refine the ways in which  
 18 identified and counted users on Twitter’s platform for MAU purposes; and (iii) addressed and  
 19 fixed technical bugs and issues with its systems that tracked and calculated MAU. *See, e.g.*,  
 20 TWTR\_SHEN\_00126973; TWTR\_SHEN\_00127040; TWTR\_SHEN\_00127239;  
 21 TWTR\_SHEN\_00127394; TWTR\_SHEN\_00227673.<sup>2</sup>

22  
 23 **INTERROGATORY NO. 21:**

24  
 25 \_\_\_\_\_  
 26 <sup>2</sup> Twitter also notes that from early March 2015 through the end of the Relevant Period, a daily  
 27 “Key Metrics Summary” email was distributed to certain Twitter employees that purported to  
 28 contain a daily MAU figure. Twitter also refers Plaintiffs to those emails for a rough  
 approximation of Twitter’s daily MAU figures, subject to the same limitations and conditions set  
 forth above with regard to the daily Global Growth Metrics emails.

1           **For each day of the Relevant Period, identify Your MAU for the Top 20 Markets (as**  
 2 **defined by Your answer to National Elevator Industry Pension Fund’s Fifth Set of**  
 3 **Interrogatories to Defendant Twitter, Inc., Interrogatory No. 13).**

4           **RESPONSE TO INTERROGATORY NO. 21:**

5           In addition to the foregoing General Objections and Objections to Definitions, which are  
 6 incorporated by reference herein, Twitter specifically objects to this Interrogatory as overbroad,  
 7 unduly burdensome, vague, ambiguous and duplicative of information already in Plaintiffs’  
 8 possession. Twitter further objects to this Interrogatory to the extent that it seeks information  
 9 protected by the attorney-client privilege, work product doctrine, common interest privilege,  
 10 and/or any other constitutional, statutory, regulatory, or common law privilege, doctrine,  
 11 immunity, rule of confidentiality, or protection from disclosure that may attach to the information  
 12 requested.

13           Twitter further objects to the term “Top 20 Markets” as vague and ambiguous, as the  
 14 Interrogatory does not define what “Top 20 Markets” means, but rather purports to incorporate by  
 15 reference Twitter’s response to NEI Interrogatory No. 13 asking Twitter to identify its Top 20  
 16 Markets for each quarter during the Relevant Period. For the same reasons that NEI Interrogatory  
 17 No. 13 is objectionable, so too is this Interrogatory objectionable, and Twitter incorporates its  
 18 specific objections to NEI Interrogatory No. 13 to this Interrogatory as if stated herein.

19           Twitter further objects to the term “MAU” as vague and ambiguous, for the same reasons  
 20 set forth above in Twitter’s definitional objections to that term. Twitter further objects to this  
 21 Interrogatory because it: (i) suggests that Twitter had a single, company-wide definition of the  
 22 term “MAU” during the Relevant Period; and (ii) purports to require Twitter to create and provide  
 23 such a definition for purposes of responding to this Interrogatory.

24           Twitter also objects that Interrogatory is vague, ambiguous, and unintelligible because it is  
 25 unclear whether this Interrogatory seeks a contemporaneous measurement of MAU, or a post hoc  
 26 calculation of MAU for Twitter’s top 20 markets for each day during the Relevant Period. To the  
 27 extent this Interrogatory requests that Twitter conduct a post-hoc calculation of MAU for each of  
 28 its top 20 markets for each day during the Relevant Period for purposes of responding to this

Interrogatory, Twitter objects to this Interrogatory as vague, unduly burdensome, and exceeding the requirements of Applicable Law. To the extent this Interrogatory requests that Twitter identify any contemporaneous measurement of MAU for each of Twitter's top 20 markets on any particular day during the Relevant Period, Twitter objects to this Interrogatory for the following reasons:

Twitter provided the definition it used for its publicly disclosed MAU in its SEC filings during the Class Period. *See, e.g.*, Twitter, Inc. 2014 Form 10-K at 45 ("We define MAUs as Twitter users who logged in or were otherwise authenticated and accessed Twitter through our website, mobile website, desktop or mobile applications, SMS or registered third-party applications or websites in the 30-day period ending on the date of the measurement."). That definition changed over time for reasons stated in those filings, including because of, for example, changes (i) regarding the manner and ways in which Twitter users could log in to or access the platform, including, but not limited to, users being able to log in to Twitter through new, non-Twitter owned and operated platforms and applications and Twitter adjusting the ways in which it authenticated its users (*see, e.g.*, Twitter, Inc. Form 10-Q at 4 (filed May 11, 2015)); and (b) to Twitter's subjective processes for identifying fake, spam, or robot accounts, or users who had violated Twitter's terms of service; among other reasons. The same definitions did not necessarily apply to all instances in which MAU was calculated internally. Further, Twitter periodically reassessed and revised MAU figures as part of its normal processes for identifying and eliminating fake, spam, and robot accounts, including for, but not limited to, external reporting purposes. For all of these reasons, Twitter is not aware of a single, company-wide or "official" daily figure for "MAU".

Subject to and without waiving the foregoing General and Specific Objections, and based on Twitter's understanding and reasonable interpretation of the Interrogatory, Twitter responds it conducted a reasonable investigation and has not identified any document or record reflecting Twitter's Top 20 Markets (as Twitter defines those markets in its response to NEI Interrogatory No. 13) on each day during the Relevant Period, regardless of criteria or definition used to determine the Top 20 Markets (*e.g.*, MAU, DAU, revenue, etc.); nor has it identified any



document or record reflecting MAU, however defined or calculated, on a daily basis for each of Twitter's markets during the Relevant Period. Twitter further responds that it produced in this litigation documents containing Twitter's daily MAU for each month and averaged over each quarter (as the context provides) for Twitter's Top 20 markets (ranked by overall MAU) during the Relevant Period, including certain "User & Monetization Metrics" presentations (*see, e.g.* TWTR\_SHEN\_00227509; TWTR\_SHEN\_00037364) and documents contained in earnings binder prepared for certain earnings calls (*see, e.g.*, TWTR\_SHEN\_00274808). Twitter refers Plaintiffs to these documents for an approximation of the monthly and quarterly average MAU for Twitter's top 20 markets (ranked by overall MAU) during the Relevant Period. However, those figures do not necessarily reflect all the ways that Twitter and its employees calculated MAU or determined Twitter's top 20 markets. Further, those figures could be, and sometimes were subject to subsequent revision as Twitter (i) conducted its normal and ongoing processes for identifying and eliminating fake, spam, and robot accounts, to ensure the accuracy of the data for external reporting purposes, (ii) continued to refine the ways in which identified and counted users on Twitter's platform for MAU purposes; and (iii) addressed and fixed technical bugs and issues with its systems that tracked and calculated MAU. *See, e.g.*, TWTR\_SHEN\_00126973; TWTR\_SHEN\_00127040; TWTR\_SHEN\_00127239; TWTR\_SHEN\_00127394; TWTR\_SHEN\_00227673.

**INTERROGATORY NO. 22:**

**State all facts and Identify all Documents supporting Your contention that changes in ad engagements were "intended to serve as a measure of user engagement . . . on the Company's platform." *See* Twitter's Correspondence Letter to the Securities and Exchange Commission (the "SEC") dated May 11, 2015.**

**RESPONSE TO INTERROGATORY NO. 22:**

In addition to the foregoing General Objections, which are incorporated by reference herein, Twitter specifically objects that the term "state all facts" is vague and ambiguous in the context of this Interrogatory. Twitter further objects to this Interrogatory as overbroad and unduly



burdensome to the extent it seeks information that is already in Plaintiffs' possession. Twitter also objects to this Interrogatory to the extent that it seeks information protected by the attorney-client privilege, work product doctrine, common interest privilege, and/or any other constitutional, statutory, regulatory, or common law privilege, doctrine, immunity, rule of confidentiality, or protection from disclosure that may attach to the information requested. Moreover, Twitter objects to this Interrogatory as overbroad, unduly burdensome, and beyond the permissible scope of discovery to the extent that it seeks information about "all facts" and "all Documents" on the topic that this Interrogatory purports to cover. Twitter further objects to this Interrogatory as premature to the extent it calls for expert opinion.

Subject to and without waiving the foregoing General and Specific Objections, and based on Twitter's understanding and reasonable interpretation of the Interrogatory, Twitter responds that it used a number of metrics to measure the engagement of its users including but not limited to changes in ad engagements, timeline views, timeline views per MAU, tweets, tweet impressions, retweets, favorites, direct messages, and searches. Of these, changes in ad engagements was the metric that most directly reflected Twitter's revenue-producing engagement during the Relevant Time Period. Twitter defines an ad engagement as a user interaction with one of Twitter's pay-per-performance advertising products. During the Relevant Time Period, ad engagements with Twitter's advertising products included a user expanding, retweeting, favoriting or replying to a Promoted Tweet, playing an embedded video, downloading a promoted mobile application or opting into further communications from an advertiser in a Promoted Tweet, following the account that tweets a Promoted Tweet, or following a Promoted Account. Therefore, changes in ad engagements indicate trends in user engagement and, in particular, user engagement with ads, which affects revenue.

Twitter has identified the following categories of documents that support its contention through a reasonable search of readily available material:

- Twitter's SEC filings including, but not limited to:
  - Twitter's Final Amended Registration Statement filed on November 4, 2013
  - Twitter's Letter to the SEC dated September 25, 2013

- 1           ○ Twitter’s Letter to the SEC dated May 11, 2015
- 2           ○ Q3 2014 10-Q filed on August 11, 2014
- 3           ○ Form 10-K Filed on March 2, 2015
- 4           ○ Q1 2015 10-Q filed on May 11, 2015
- 5       • Twitter’s Earnings call transcripts, including but not limited to:
  - 6           ○ TWTR\_SHEN\_00000001
  - 7           ○ TWTR\_SHEN\_00000042
  - 8           ○ TWTR\_SHEN\_00000084
- 9       • Metrics Task Force Notes
  - 10           ○ TWTR\_SHEN\_00365833
  - 11           ○ TWTR\_SHEN\_00333383

12           Twitter reserves the right to supplement and/or amend this response should it learn of any  
 13 additional information responsive to the Interrogatory.

14 **INTERROGATORY NO. 23:**

15           **State all facts and Identify all Documents supporting Your contention that “[t]he**  
 16 **Company’s management internally tracks changes in ad engagements and cost per ad**  
 17 **engagement on the Twitter platform to monitor trends in user engagement and advertising**  
 18 **services revenue and believes these metrics are helpful to investors to understand the same.”**  
 19 **See Twitter’s Correspondence Letter to the SEC dated May 11, 2015.**

20 **RESPONSE TO INTERROGATORY NO. 23:**

21           In addition to the foregoing General Objections, which are incorporated by reference  
 22 herein, Twitter specifically objects that the term “state all facts” is vague and ambiguous in the  
 23 context of this Interrogatory. Twitter further objects to this Interrogatory as overbroad and unduly  
 24 burdensome to the extent it seeks information that is already in Plaintiffs’ possession. Twitter also  
 25 objects to this Interrogatory to the extent that it seeks information protected by the attorney-client  
 26 privilege, work product doctrine, common interest privilege, and/or any other constitutional,  
 27 statutory, regulatory, or common law privilege, doctrine, immunity, rule of confidentiality, or  
 28 protection from disclosure that may attach to the information requested. Moreover, Twitter

objects to this Interrogatory as overbroad, unduly burdensome, and beyond the permissible scope of discovery to the extent that it seeks information about “all facts” and “all Documents” on the topic that this Interrogatory purports to cover.

Subject to and without waiving the foregoing General and Specific Objections, and based on Twitter’s understanding and reasonable interpretation of the Interrogatory, Twitter responds that Twitter’s management received information about changes in ad engagements and cost per ad engagement through internal company dashboards including the CFO dashboard (and related Key Metrics Summary emails). Information about these metrics was also provided to management on a monthly basis in User & Monetization Metrics presentations and on a quarterly basis in earnings binders distributed prior to earnings calls. As described in response to Interrogatory No. 22, ad engagements are a measure of user interactions with Twitter’s pay-per-performance advertising products, and changes in ad engagements therefore provide both Twitter’s management and investors with information about trends in user engagement. Cost per ad engagement is a metric that measures average advertiser spend per ad engagement, and it provides both Twitter’s management and investors with information about advertiser demand.

Twitter has identified the following documents that support its contention through a reasonable search of readily available material:

- Twitter’s SEC filings, including but not limited to:
  - Twitter’s Letter to the SEC dated September 25, 2013
  - Twitter’s Form 10Q filed with the SEC on November 6, 2014
  - Twitter’s Letter to the SEC dated May 11, 2015
  - Twitter’s Form 10Q filed with the SEC on May 11, 2015
- Twitter’s Earnings Call Transcripts, including but not limited to:
  - TWTR\_SHEN\_00000001
  - TWTR\_SHEN\_00000042
  - TWTR\_SHEN\_00000084
- Twitter’s Earnings binders, including but not limited to:
  - TWTR\_SHEN\_00113777

- 1           ○ TWTR\_SHEN\_00356924
- 2           • Metrics dashboards and emails summarizing the contents of those dashboards, including
- 3           but not limited to:
- 4           ○ TWTR\_SHEN\_00255755
- 5           ○ TWTR\_SHEN\_00038077
- 6           ○ TWTR\_SHEN\_00038423
- 7           • User & Monetization decks, including but not limited to:
- 8           ○ TWTR\_SHEN\_00230326
- 9           ○ TWTR\_SHEN\_00113650
- 10          ○ TWTR\_SHEN\_00113618
- 11          ○ TWTR\_SHEN\_00113553
- 12          ○ TWTR\_SHEN\_00227509
- 13          ○ TWTR\_SHEN\_00037364
- 14          ○ TWTR\_SHEN\_00113372
- 15          ○ TWTR\_SHEN\_00235238
- 16          ○ TWTR\_SHEN\_00227580
- 17          ○ TWTR\_SHEN\_00247649
- 18          • Metrics Task Force Notes
- 19           ○ TWTR\_SHEN\_00365833
- 20           ○ TWTR\_SHEN\_00333383

21           Twitter reserves the right to supplement and/or amend this response should it learn of any  
22 additional information responsive to the Interrogatory.

23 **INTERROGATORY NO. 24:**

24           **State all facts and Identify all Documents supporting Your contention that “[t]o the**  
25 **extent [Twitter’s] user growth rate slows, [Twitter’s] success will become increasingly**  
26 **dependent on [Twitter’s] ability to increase levels of user engagement.” See Twitter’s**  
27 **Amendment N.4 to Form S- 1 filed with the SEC on November 4, 2013; see also Transcript**  
28

1 of Deutsche Bank Technology Conference dated September 16, 2015  
 2 (TWTR\_SHEN\_00261564).

3 **RESPONSE TO INTERROGATORY NO. 24:**

4 In addition to the foregoing General Objections, which are incorporated by reference  
 5 herein, Twitter specifically objects that the term “state all facts” is vague and ambiguous in the  
 6 context of this Interrogatory. Twitter further objects to this Interrogatory as overbroad and unduly  
 7 burdensome to the extent it seeks information that is already in Plaintiffs’ possession. Twitter also  
 8 objects to this Interrogatory to the extent that it seeks information protected by the attorney-client  
 9 privilege, work product doctrine, common interest privilege, and/or any other constitutional,  
 10 statutory, regulatory, or common law privilege, doctrine, immunity, rule of confidentiality, or  
 11 protection from disclosure that may attach to the information requested. Moreover, Twitter  
 12 objects to this Interrogatory as overbroad, unduly burdensome, and beyond the permissible scope  
 13 of discovery to the extent that it seeks information about “all facts” and “all Documents” on the  
 14 topic that this Interrogatory purports to cover. Twitter further objects to this Interrogatory as  
 15 premature to the extent it calls for expert opinion. Twitter also objects to this Interrogatory as  
 16 vague and ambiguous to the extent it purports to reference an unidentified statement in a  
 17 Transcript of a Deutsche Bank Technology Conference dated September 16, 2015. Twitter further  
 18 objects to this interrogatory as vague and ambiguous as it does not accurately reflect the full  
 19 statement Twitter made as to which Plaintiffs ask Twitter to identify all documents and state all  
 20 facts. In its Amendment N.4 to its Form S-1 filed on November 4, 2013, Twitter stated that “[t]o  
 21 the extent our user growth rate slows, our success will become increasingly dependent on our  
 22 ability to increase levels of user engagement and ad engagement on Twitter” and “[t]o the extent  
 23 our user growth rate slows, our revenue growth will become increasingly dependent on our ability  
 24 to increase levels of user engagement, as measured by timeline views and timeline views per  
 25 MAU, and monetization, as measured by advertising revenue per timeline view.” Twitter’s  
 26 response will address only the quoted statements from its Amendment N. 4 to Form S-1 filed with  
 27 the SEC on November 4, 2013.

1 Subject to and without waiving the foregoing General and Specific Objections, and based  
 2 on Twitter's understanding and reasonable interpretation of the Interrogatory, Twitter responds  
 3 that the size of its user base its users' level of engagement are factors that affect its success.  
 4 Twitter generates a substantial majority of its revenue through engagement by its users with the  
 5 ads it displays on its platform. Thus, if Twitter's user growth rate slows, it can still increase its  
 6 revenue by increasing its existing users' level of engagement with its advertisements, among other  
 7 ways.

8 Twitter has identified the following documents that support its contention through a  
 9 reasonable search of readily available material:

- 10 • Twitter's SEC filings, including, but not limited to:
  - 11 ○ Twitter's Letter to the SEC dated September 25, 2013
  - 12 ○ Twitter's Amendment N.4 to Form S-1 filed with the SEC on November 4, 2013
  - 13 ○ Twitter's Form 10Q filed with the SEC on November 6, 2014
  - 14 ○ Twitter's Form 10K filed with the SEC on March 2, 2015
  - 15 ○ Twitter's Letter to the SEC dated May 11, 2015
  - 16 ○ Twitter's Form 10Q filed with the SEC on May 11, 2015
- 17 • Twitter's Earnings Call Transcripts, including, but not limited to:
  - 18 ○ TWTR\_SHEN\_00000001
  - 19 ○ TWTR\_SHEN\_00000042
  - 20 ○ TWTR\_SHEN\_00000084
- 21 • Twitter's Earnings Binders, including, but not limited to:
  - 22 ○ TWTR\_SHEN\_00113777
  - 23 ○ TWTR\_SHEN\_00356932
- 24 • Twitter's revenue models, including, but not limited to:
  - 25 ○ TWTR\_SHEN\_00363978
  - 26 ○ TWTR\_SHEN\_00364031

27 **INTERROGATORY NO. 25:**

28

1           **State all facts and Identify all Documents supporting Your contention that “[w]e**  
 2 **believe that [Twitter’s] future revenue growth will depend on, among other factors,**  
 3 **[Twitter’s] ability to attract new users, increase user engagement and ad engagement . . . .”**  
 4 **See Twitter’s Form 10-K filed with the SEC on March 2, 2015.**

5           **RESPONSE TO INTERROGATORY NO. 25:**

6           In addition to the foregoing General Objections, which are incorporated by reference  
 7 herein, Twitter specifically objects that the term “state all facts” is vague and ambiguous in the  
 8 context of this Interrogatory. Twitter further objects to this Interrogatory as overbroad and unduly  
 9 burdensome to the extent it seeks information that is already in Plaintiffs’ possession. Twitter also  
 10 objects to this Interrogatory to the extent that it seeks information protected by the attorney-client  
 11 privilege, work product doctrine, common interest privilege, and/or any other constitutional,  
 12 statutory, regulatory, or common law privilege, doctrine, immunity, rule of confidentiality, or  
 13 protection from disclosure that may attach to the information requested. Moreover, Twitter  
 14 objects to this Interrogatory as overbroad, unduly burdensome, and beyond the permissible scope  
 15 of discovery to the extent that it seeks information about “all facts” and “all Documents” on the  
 16 topic that this Interrogatory purports to cover. Twitter further objects to this Interrogatory as  
 17 premature to the extent it calls for expert opinion. Twitter further objects to this Interrogatory as  
 18 vague and ambiguous as it does not accurately reflect the full statements Twitter made as to which  
 19 Plaintiffs ask Twitter to identify all documents and state all facts. In its Form 10-K filed with the  
 20 SEC on March 2, 2015, Twitter stated that “[w]e believe that our future revenue growth will  
 21 depend on, among other factors, our ability to attract new users, increase user engagement and ad  
 22 engagement, increase our brand awareness, compete effectively, maximize our sales efforts,  
 23 demonstrate a positive return on investment for advertisers, successfully develop new products  
 24 and services and expand internationally.” Twitter’s response will address only the quoted  
 25 statement from its Form 10-K filed with the SEC on March 2, 2015.

26           Subject to and without waiving the foregoing General and Specific Objections, and based  
 27 on Twitter’s understanding and reasonable interpretation of the Interrogatory, Twitter responds  
 28 that both the size of its user base and its users’ level of engagement are two of many factors that

1 affect its revenue growth. Twitter generates a substantial majority of its revenue through  
 2 engagement by its users with the ads it displays on its platform. Thus, Twitter's revenue growth  
 3 depends on its user growth and its users' level of engagement with its advertisements, among  
 4 other things.

5 Twitter has identified the following documents that support its contention through a  
 6 reasonable search of readily available material:

- 7 • Twitter's SEC filings, including, but not limited to:
  - 8 ○ Twitter's Letter to the SEC dated September 25, 2013
  - 9 ○ Twitter's Amendment N.4 to Form S-1 filed with the SEC on November 4, 2013
  - 10 ○ Twitter's Form 10Q filed with the SEC on November 6, 2014
  - 11 ○ Twitter's Form 10K filed with the SEC on March 2, 2015
  - 12 ○ Twitter's Letter to the SEC dated May 11, 2015
  - 13 ○ Twitter's Form 10Q filed with the SEC on May 11, 2015
- 14 • Twitter's Earnings Call Transcripts, including, but not limited to:
  - 15 ○ TWTR\_SHEN\_00000001
  - 16 ○ TWTR\_SHEN\_00000042
  - 17 ○ TWTR\_SHEN\_00000084
- 18 • Twitter's Earnings binders, including, but not limited to:
  - 19 ○ TWTR\_SHEN\_00113777
  - 20 ○ TWTR\_SHEN\_00356932
- 21 • Twitter's revenue models, including, but not limited to:
  - 22 ○ TWTR\_SHEN\_00363978
  - 23 ○ TWTR\_SHEN\_00364031



1 Dated: May 31, 2019

SIMPSON THACHER & BARTLETT LLP

2  
3 /s/ Alexis Coll-Very

Alexis Coll-Very (Bar No. 212735)

4 *Attorneys for Defendants*

5 *Twitter, Inc., Richard Costolo, and Anthony Noto*

**VERIFICATION OF INTERROGATORY RESPONSES**

I, Michele Lee, am Legal Counsel of Twitter, Inc. I believe, based on reasonable inquiry, that the foregoing responses are true and correct to the best of my knowledge, information and belief.

I verify under penalty of perjury that the foregoing is true and correct.

Executed on May 31, 2019.

Michele Lee /s/

Michele Lee  
Legal Counsel

**PROOF OF SERVICE**

I, Janie Franklin, declare that I am employed in Santa Clara County. I am over the age of eighteen (18) years and not a party to this action. My email address is janie.franklin@stblaw.com, and my business address is Simpson Thacher & Bartlett LLP, 2475 Hanover Street, Palo Alto, California.

On May 31, 2019, I served the following document:

**DEFENDANT'S RESPONSES AND OBJECTIONS TO KBC ASSET MANAGEMENT NV'S FIFTH SET OF INTERROGATORIES TO DEFENDANT TWITTER, INC.**

on all interested parties in this action by transmitting a true copy of each document listed above by electronic mail to the email addresses listed below on this date, before 6:00 p.m. PST, pursuant to the Stipulation For Email Service filed on January 8, 2018:

Party	Attorneys	Emails
Plaintiffs	Lesley E. Weaver Matthew S. Weiler Meghan S. Oliver Max N. Gruetzmacher Gregg S. Levin Meredith Weatherby Daniel S. Drosman Christopher R. Kinnon Susannah R. Conn Teresa Holindrake Nathan Lindell Terry Koelbl Casey Reis Scott Saham Heather Schlesier	lweaver@bfalaw.com mweiler@bfalaw.com moliver@motleyrice.com mgruetzmacher@motleyrice.com glevin@motleyrice.com mweatherby@motleyrice.com dand@rgrdlaw.com ckinnon@rgrdlaw.com sconn@rgrdlaw.com tholindrake@rgrdlaw.com tkoelbl@rgrdlaw.com nlindell@rgrdlaw.com creis@rgrdlaw.com scotts@rgrdlaw.com hschlesier@rgrdlaw.com

I declare under penalty of perjury that the foregoing is true and correct. Executed on May 31, 2019, at Palo Alto, California.

/s/ Janie Franklin  
Janie Franklin